Alcohol and Substance Use Disorders in Humanitarian Emergencies: Co-morbid Mental Disorders, Identifying Gaps and Emerging Trends

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Abstract: The mental health needs of displaced persons have traditionally taken the backstage in the conceptualization of the overall medical treatment needs of this population. Despite the intuitive understanding that the trauma experienced by these individuals makes them particularly predisposed to mental illness and substance use disorders, there remains a dearth of scientific data to shed light on this all-important subject. Epidemiologic literature and data consistently fall short in describing the extent of this problem and in particular the attendant alcohol and substance abuse that not only afflict people in humanitarian contexts but also aid workers who attempt to lend a helping hand to these communities. There is little or no documentation on effective, and efficient ways to predict, diagnose and treat alcohol and substance use disorders among displaced persons living in humanitarian regions of the world. This paper describes themultidirectional nature of mental illness and substance abuse, the gaps in knowledge, as well as emerging trends particularly in diagnosis and treatment.

Keywords: Substance use disorder; humanitarian emergencies; complex emergencies; alcohol abuse; mental illness

1. Introduction

1.1 Text

Alcohol Use Disorder (AUD) and Substance Use Disorders (SUD) are pathological patterns of behavior related to the use of alcohol or any substance. Diagnosis is often based on a cluster of cognitive, behavioral, and physiological symptoms indicating that an individual continues the pattern of behavior despite significant socioeconomic and physical problems related to the effects of the substance[1]. Behavioral, physical, and psychological dependence on any substance is defined by substance-seeking activities, physiological effects of multiple episodes of substance and craving[1]. Harmful alcohol use and substance abuse create profound economic and social issues that put enormous burden on the society with particular strain on the already burdened humanitarian systems particularly in conflict and post-conflict contexts.

Humanitarian emergencies are events or series of events that represent a critical threat to the health, safety, security or wellbeing of a community or other large group of people, usually over a wide area[2]. Humanitarian emergency and post emergency situations around the world are caused by armed conflicts, epidemics, famine, and natural disasters. In the wake of humanist catastrophes, affected individuals are left in urgent need of not only life-saving assistance such as shelter, food, water and health care, but also a physical and mental illnesses including alcohol and substance use disorders[3]. Several factors have been hypothesized to be responsible for the prevalence of substance abuse and dependence during and after humanitarian emergencies, including the need to self-medicate for pain, relive stress, depression, anxiety and other disabling symptoms of Post-Traumatic Stress Disorder (PTSD)[3,4]. The number of persons

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Received: Dec 10, 2021; Accepted: Jan 30, 2022; Published online: Feb 10, 2022.
facing forcible displacement stands over 55 million including 38 million internally displaced persons and 18 million living in other countries. The majority of these individuals live in middle and low-income countries\(^5,6\). An estimated 11.5 million people in Syria, and 6.8 million people in Ethiopia face humanitarian emergencies. The Zika virus and Ebola virus outbreaks in West Africa and Angola’s worst outbreak of yellow fever in 30 years, all leave significant distress in their wake\(^7\). More recently, the Boko Haram in Northern Nigeria has left many displaced and in dire need for humanitarian support.

In emergency situations such as these, individuals and responders require many levels of support in terms of safety from violence, food supply, medicine supply, vaccination, and mental health care, such support is beyond what any one organization or government can provide. Unfortunately, the issue of mental health, alcohol and substance abuse in the context of humanitarian emergencies suffers from lack of attention\(^3,4,8\). The rise in alcohol and substance abuse in these regions is unprecedented but a close examination of the neurobiology of addiction makes this phenomenon quite predictable and intuitive.

Although the management of alcohol and substance abuse is recognized in the minimum standards outlined by the Sphere Project, the treatment of “harm related to alcohol and drugs” is outlined in the essential health services\(^9\). Research and literature that address mental illness in humanitarian emergencies, as well as literature on the epidemiology, impact, and treatment of substance abuse in conflict and post-conflict situations is very sparse and levels of evidence mostly weak\(^3,8\). In order to improve the mental health of victims of humanitarian emergencies, a thorough understanding of the etiologies and potential consequences of unidentified and untreated SUD is necessary. SUDs are ubiquitous as they could be the cause or consequence of other severe mental disorders, alcohol and substance abuse also make the course of mental illnesses much longer and distressing with a worse prognosis. Early identification and treatment of comorbid substance abuse improves individuals’ quality of life significantly\(^10\). The clinical presentation of alcohol and substance abuse in humanitarian situations poses particular challenges because of the multidirectional and complex interactions of substance abuse, and mental illness such as Post Traumatic Stress Disorder (PTSD), Acute Stress Disorder (ASD), Major Depressive Disorder and the schizophrenias (see Figure 1). Although several authors have noted the link with alcohol and mental illness, Hanna, 2016 noted, however, that the link between substance abuse and conflict situations is “not fully developed”, this lack of empirically data has been a subject of much debate\(^4,6\). Much of the data is anecdotal and “grey” as an example, the pattern of increasing trends in opioid use seen in combatants and non-combatants in Afghanistan and in Libya. Noted trends in Libya has been the rise in HIV linked to intravenous use of opioids\(^4\). Other than the main classes of substances, there are new trends identified, one of which is Khat, a traditional substance used in Somalia but a 2005 review shows an increase use among ex-combatant population\(^11\).

The alcohol and substance abuse treatment may be seen to be a burden on the already overstretched mental health systems in humanitarian contexts, but the resulting violence and security concerns related to substance use as seen amongst the displaced population and also among humanitarian workers, combatants and ex-combatants, make this a critical idea to improve the long-term health of the population\(^3,6,8\).

1.2 Global epidemiology

As stated above, mental illnesses are prevalent in the context of humanitarian emergencies, but the size of the problem is unclear as “little epidemiological work” is available\(^2,12\). A survey in Timor-Leste shows a point prevalence of “clinically relevant” mental disorders of 5.1%. Similarly, a review by Coldiron and colleagues in 2003 showed a prevalence of about 5% among patients attending Médecins Sans Frontières (MSF) mental health programs in China, Colombia, Gaza and Nablus\(^12\). Table 1 below shows the pattern of diagnoses of mental health disorder cases at community based mental health clinics in five humanitarian settings\(^2\).
Table 1. Diagnoses of cases at community based mental health clinics in five humanitarian settings (adapted from Jones et al, 2009)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Substance Dependence</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Substance Induced Psychosis</td>
<td>5 (3%)</td>
<td>1</td>
<td>5 (1%)</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Schizophrenia spectrum disorders</td>
<td>10 (5%)</td>
<td>12 (4%)</td>
<td>85 (18%)</td>
<td>14 (6%)</td>
<td>20 (31%)</td>
</tr>
<tr>
<td>Other non-organic psychotic disorders</td>
<td>35 (17%)</td>
<td>0</td>
<td>0</td>
<td>2 (1%)</td>
<td>0</td>
</tr>
<tr>
<td>Bipolar disorder</td>
<td>8 (4%)</td>
<td>7 (2%)</td>
<td>11 (2%)</td>
<td>10 (4%)</td>
<td>4 (6%)</td>
</tr>
<tr>
<td>Depression</td>
<td>5 (3%)</td>
<td>47 (13%)</td>
<td>120 (25%)</td>
<td>92 (38%)</td>
<td>12 (18%)</td>
</tr>
<tr>
<td>Neurotic and Somatoform disorders</td>
<td>1</td>
<td>35 (10%)</td>
<td>41 (9%)</td>
<td>5 (2%)</td>
<td>3 (5%)</td>
</tr>
<tr>
<td>Reaction to severe stress and Adjustment disorders</td>
<td>0</td>
<td>39 (11%)</td>
<td>92 (19%)</td>
<td>6 (3%)</td>
<td>4 (6%)</td>
</tr>
<tr>
<td>Developmental disorders including PDD**</td>
<td>0</td>
<td>3 (1%)</td>
<td>3 (1%)</td>
<td>3 (1%)</td>
<td>1 (2%)</td>
</tr>
<tr>
<td>Severe Neuropsychiatric disorders</td>
<td>186 (91%)</td>
<td>167 (47%)</td>
<td>136 (28%)</td>
<td>(38%)</td>
<td>37 (55%)</td>
</tr>
</tbody>
</table>

*North-West Frontier Province  
**Pervasive Developmental Disorder


The epidemiological data of alcohol and substance abuse in emergency settings is even more nebulous. Globally, the World Health Organization (WHO) reports a worldwide estimate of about 185 million illicit drug users. Tobacco, alcohol and illicit drugs have been noted to add significantly to the global burden of disease, contributing about 12.4% of all deaths worldwide in the year 2000, accounting for 8.9% total years of life lost due to substances[13]. The World drug report of the United Nations Office of Drugs and Crime (UNODC) estimated that about 230 million people have used an illicit drug at least once in 2010[14]. Heroin, Cocaine and other drugs kill about 0.2 million people each year, undermine economic and social development and contribute to crime, instability, insecurity and the spread of HIV. The two most widely used illicit drugs however, remain cannabis (global annual prevalence ranging from 2.6 to 5.0 per cent) and Amphetamine-type stimulants (ATS)[14].

According to the United Nations Office for Drugs and Crime (UNODC), about 15 million people worldwide consume opiates. The main source for heroin’s underground economy is concentrated in three areas: Afghanistan,
South-East Asia (mostly Myanmar) and Latin America (Mexico and Colombia). Afghanistan alone accounts for around 90% of the global illicit opium production. Recently Africa is an emerging as the destination for the Afghan heroin[^14^]. Heroin abuse is, however, seen in the context of an even broader use of other substances like Cocaine, and Alcohol. Cannabis is the most widely produced and trafficked drug globally, 25% of the global production takes place in Africa, especially in Morocco, South Africa, Lesotho, Swaziland, Malawi, Nigeria, Ghana, Senegal, Gambia, Kenya, and Tanzania[^14^].

### 1.3 Risk factors for substance abuse in humanitarian emergencies

The paucity of data on the subject of alcohol and substance abuse in humanitarian emergencies is well known and has been a subject for many initiatives, however, the few literature available addresses mainly alcohol abuse. Clearly, the identification of the risk factors for alcohol and substance abuse in humanitarian contexts presents an opportunity for mental health workers to potentially prescribe timely treatment. Risk factors identified in literature include the following:[^3^,^4^,^6^]

- Male Gender
- Older Age
- Marital/Relationship status
- Level of education
- Premorbid mental illness (acute stress disorder, PTSD, depression, anxiety, psychosis)
- Family history of alcohol/substance use
- Prior alcohol and substance abuse, and
- Postmigration trauma and stress
- Conflict and forced displacement

The male gender has been shown to have the strongest association with the risk of alcohol and association of PTSD[^3^,^6^,^15^]. Higher stress levels, unemployment, issues with assimilation and acculturation, difficulties in developing coping strategies in the face of new sociocultural norm, all make Refugees a primal target for developing alcohol and substance use disorders. Older age[^16^], being single have also been reported to be associated with a higher risk of alcohol abuse[^17^], but a higher education is thought to be protective[^18^]. Recognizing alcohol and substance abuse in humanitarian emergencies, among displaced persons and aid workers, can be very challenging and requires skilled mental health workers. Unlike in the general population, the challenge of diagnosis is evident in the atypical and unusual presentation of these disorders in the context of trauma, comorbid medical and mental health conditions. Figure 1 below shows a schematic representation of the interaction between trauma, psychosocial stressors, mental illness and alcohol/substance abuse.

**Figure 1.** A schematic representation of the cycle of trauma, psychosocial stressors, mental disorder and substance abuse
2. Comorbid mental disorders

2.1 Acute Stress and Post Traumatic Stress Disorders

Acute Stress Disorder (ASD) and Post Traumatic Stress Disorder (PTSD) are the most studied and researched mental illnesses in the context of humanitarian crises. The reported point prevalence of PTSD among Syrian refugees in Turkey is 33.5%. As the schematic in Figure 1 above shows, mental disorders and psychosocial stressors play important roles in the development of alcohol and substance use in humanitarian settings. Individuals tend to self-medicate by their symptoms. A recognition of symptoms is critical for a prompt recognition and treatment of these disorders.

Both ASD and PTSD share similar symptomatology and etiology. The only difference being that ASD is a precursor to PTSD as by definition it lasts less than 30 days (3-30 days) while symptoms of PTSD last longer than 30 days. Thus, early diagnosis and treatment of Acute Stress Disorder (ASD) is the way to prevent PTSD. The 5th edition of the Diagnostic and Statistical Manual (DSM-5) outlines the diagnostic criteria for ASD and PTSD. Individuals must meet criteria in five domains including: Exposure, Intrusive symptoms, Avoidance symptoms, Alterations in negative cognitions and mood and alterations in arousal.

The use of structured and standardized symptoms checklists are good means of screening individuals for mental illness and for assessing response to treatment. These may include self-reported or clinician administered such as the PCL-5 which is a 20-item self-report measure that assesses the symptoms of PTSD. The PCL-5 has been used to screen for PTSD, monitors symptom change and make a provisional diagnosis. The gold standard for diagnosing PTSD however, is a structured clinical interview such as the Clinician-Administered PTSD Scale (CAPS-5).

The treatment of ASD and PTSD will include psychopharmacology and psychotherapy. Early supportive therapy, psychoeducation, and case management are helpful in acutely traumatized individuals. Other psychotherapies such as Trauma focused Cognitive Behavioral Therapy (CBT) and Eye Movement Desensitization and Reprocessing (EMDR) have all been approved to be effective in treating symptoms. Psychological debriefing also known as Psychological Critical Incident Stress Debriefing (CISD) and single session psychotherapy have not been shown to be effective and may actually worsen PTSD symptoms by reducing coping mechanisms. Psychopharmacology treatments are symptom based, approved medications include Selective Serotonin Reuptake Inhibitors, Quetiapine, and Prazosin. Medications such as Benzodiazepines have been shown to worsen symptoms.

2.2 Anxiety Disorders

Anxiety disorders have not gained due attention in humanitarian literature probably due to underdiagnoses or perhaps misdiagnosis as PTSD, but these two entities although, share some common symptoms, have a different clinical course. Anxiety disorders could also be comorbid with other mental illnesses and particularly with alcohol and substance abuse. The anxiety disorders for which substance use may become comorbid include Generalized Anxiety Disorder (GAD) and Panic disorder (PD). The DSM-5 outlines specific diagnostic criteria for diagnosis GAD, PD as well another anxiety disorder like Separation Anxiety Disorder (SAD), Agoraphobia or specific phobias. Diagnosis may be supported by symptoms checklist available with limited training to administer, such checklist includes Hamilton Anxiety Scale (HAM-A) and Beck Anxiety Inventory. Medications to treat anxiety disorders include Selective Serotonin Reuptake Inhibitors (SSRI), Selective Norepinephrine Reuptake Inhibitors (Fluoxetine, Fluvoxamine, Sertraline, Paroxetine, Citalopram and Escitalopram), Benzodiazepines and atypical antipsychotics (Quetiapine and Risperidone). CBT, mindfulness-based psychotherapies may also be useful. Several studies have now shown that combining CBT and medications as superior to either alone. Several medications are available for treating depression, including the SSRIs, Selective Norepinephrine Reuptake Inhibitors (SNRI) such as Venlafaxine, Desvenlafaxine, Duloxetine and Milnacipran, Tricyclic Antidepressants (TCA) such as Imipramine, Desipramine, Amitriptyline and Monoamine Oxidase Inhibitors (MAOI) and others.

2.3 Depressive Disorders
Major Depressive Disorder (MDD) has commonly been reported as a common and disabling severe mental illnesses among displaced persons[22]. The psychological stresses of conflict and displacement forms the context for most of the depressive disorders as well as the attendant alcohol and substance abuse. A high index of suspicion is needed to screen individuals. Self-administered and clinician administrated tools are readily available for screening and diagnostic purposes including: Hamilton Depression scale (HAM-D), Beck Depression Inventory and Patient Health Questionnaire (PHQ-9). Another diagnostic entity that is worthy of mention here is Substance Induced Depressive Disorder which is Major Depressive Disorder in the context of substance use.

2.4 Psychotic Disorders

The relationship of immigration and trauma and psychotic disorders have been recognized in literature for a long time[21]. Primary psychotic disorders are recognized within the schizophrenia spectrum in the DSM-5. The association of psychotic disorders and substance abuse have long been a subject of scientific fascination and scholastic enquiry for which several hypotheses are proposed and the understanding of which form the basis of several treatments.

3. Assessment and management of alcohol and substance abuse

3.1 Alcohol Use Assessment

The use of standardized scales can be incorporated into clinical settings in humanitarian settings serves as an easy way to begin a necessary conversation. Several tools are available including:

The CAGE questionnaire is a simple screening tool for Alcohol Use Disorder (AUD). It applies simple questions including whether the individual feels a need to cut down on drinking, annoyed by others’ criticism of their drinking, feels guilty about drinking, or uses alcohol as an eye-opener in the morning[6,23].

The WHO Alcohol Use Disorders Identification Test (AUDIT and the AUDIT-C short form), are used with adult patients, including pregnant women. With both the AUDIT and the AUDIT-C, interpretation of the resulting score differs by sex and by age, with women and individuals age 65 and older having lower score thresholds than men or adults under age 65. The AUDIT has been used in several humanitarian settings and low-income countries[4,6,23].

The CRAFFT screening tool is used with adolescents and includes questions about being in a car driven by someone who was using alcohol or drugs, use of alcohol or drugs to relax or when alone, forgetting what was done while using alcohol or drugs, being told by family or friends to cut down on use, and getting into trouble while using alcohol or drugs[23].

The National Institute on Alcohol Abuse and Alcoholism (NIAAA) one-question screen, which is useful in identifying problematic drinking in primary care settings asks, “How many times in the past year have you had X or more drinks in a day?”, where X is 5 for men and 4 for women, with a response greater than 1 constituting a positive screen[23].

The Alcohol, Smoking and Substance Involvement Screening (ASSIST) is another useful tool[4].

Screening for other substances are also necessary in other to ascertain patterns of use. The utility of simple urine toxicology screens which may also require strips may be useful in these settings to aid diagnosis and monitor treatment.

3.2 Biopsychosocial Management of Alcohol/Substance Use Disorder in Humanitarian Settings:

The biopsychosocial management is a comprehensive model that can be applied in humanitarian settings to manage alcohol and substance use disorders. The basic premise of which involves medication management, psychotherapeutic treatment and connecting the individual to social services. The medications that have strong evidence for alcohol dependence include: Naltrexone, Acamprosate, Topiramate, Disulfiram (Antabuse)23. Another relevant initiative is the WHO Mental Health Gap Action Program (mhGAP) which “aims at scaling up services for mental, neurological and substance use disorders for countries especially with low- and middle-income”. The mhGAP-HIG (Humanitarian Intervention guide) has been use to build capacity in Syria, Libya and Somalia using the modules on
alcohol and substance abuse. The Inter Agency Standing Committee (IASC) has guidelines to enable the planning, establishment and coordination of a set of minimum multi-sectoral responses to protect and improve people’s mental health and psychosocial well-being in the midst of an emergency\(^2\). The integration of substance use and mental health services into existing primary care services has become an international imperative. The training of primary health care workers must include a basic set of knowledge and skillset that meet the needs of the population (see Figure 2 below)\(^2\):

- Communication skills
- Basic problem-solving skills
- Psychological first aid
- Recognition and front-line management of mild, moderate, and severe neuropsychiatric disorders in adults and children including:
  - Acute and chronic psychoses
  - Epilepsy
  - Alcohol and substance misuse
  - Mental retardation
  - Severe emotional disorders
  - Common mental disorders
- Simple cognitive-behavioural techniques
- Interpersonal psychotherapy group or individual approaches
- Proper use of essential psychotropic medication
- Appropriate lines of referral to social supports in the community and, if accessible, to secondary and tertiary services
- Time-management skills including service reorganisation

**Figure 2.** Basic knowledge for primary health-care workers to address mental health problems in emergency settings

### 3.3 Emerging Trends in Treatment: Telemedicine and Telepsychiatry

Telespsychiatry is a form of video conferencing that provides psychiatric services to patients living in remote locations or otherwise underserved areas. This is an emerging means of delivering the much needed highly skilled mental health services all around regions of conflict around the world. Emerging literature about telespsychiatry have shown that it is a cost-effective means of delivering comparable indices in patient satisfaction, diagnosis and management of psychiatric disorders\(^19\). Recent literature has also shown that traditional Cognitive Behavioral therapy can be delivered, quite competently via online CBT (also known as I-CBT) with comparative, if not better, outcomes\(^25\).

### 4. Conclusion

There appears to be a renewed interest in the mental health of individuals displaced by complex emergencies such as refugees, internally and externally displaced persons, individuals exposed to terrorism and natural disasters. However significant gaps exist in various areas: The main subject of study has been the individuals exposed to these disasters and not the humanitarian workers who face also face the direct effects of trauma in their line of work. Humanitarian workers
are clearly vulnerable to the effects of mental disorders and substance abuse in these contexts. Other gaps exist in the choice of most authors interest in addressing alcohol specifically and neglect other illicit substances. Substance use disorders complicate mental illnesses. The consequence of untreated alcohol and substance use disorders worsens the course and prognosis of attendant medical and mental illnesses as well as the overall quality of life of individuals. A rethink of the design of healthcare delivery in humanitarian contexts such as improved screening and training of workers, provision of tools such as training resources, and tools including standard medications, has become necessary.

Acknowledgement:
The author would like to acknowledge Professor Steve Hansch of the Milken Institute School of Public Health, George Washington University, Washington D. C for his helpful suggestions about improving this manuscript.

Author Disclosure:
The author has no conflicts of interest to disclose.

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